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ABSTRACT

The objective of a project was to make vocational educators aware of the many job titles for which physically handicapped persons are currently employed and to aid in planning vocational programs for them. The project identified a list of occupational titles held by physically handicapped individuals, identified teaching procedures for the various types of handicaps, and made some recommendations for improving vocational education programs for them. An Advisory Committee participated in developing a questionnaire and procedures for surveying physically handicapped graduates/completers from 1976-1979 vocational programs as well as businesses and industries in four regions of Kentucky. The identified job titles were tabulated by vocational education region, size of company, type and severity of impairment, and vocational program area. In addition to a final report, two other products resulted from the project--(1) Background and Survey Results and (2) a Manual. (Both are available separately--see Note.) (An exhibit lists job titles held by the physically handicapped by type and level of impairment.) (YLB)

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OCCUPATIONAL OPPORTUNITIES FOR THE PHYSICALLY HANDICAPPED

FINAL REPORT

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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Elaine F. Uthe

Department of Vocational Education
University of Kentucky

June, 1980

OE 026 163

Project Number V288I0P23F/4448 A cooperative effort between the University of Kentucky and the Kentucky Bureau of Vocational Education, Research Coordinating Unit	KENTUCKY DEPARTMENT OF EDUCATION Raymond H. Barber Superintendent

COMMONWEALTH OF KENTUCKY

Department of Education

BUREAU OF VOCATIONAL EDUCATION

FRANKFORT 40601

June 30, 1980

Dear Vocational Educators and Other Interested Individuals:

In an effort to improve program services and activities related to physically handicapped individuals, the Bureau of Vocational Education sponsored this research study to gather information and data on "Occupational Opportunities for the Physically Handicapped."

As a result of this effort we would like to share with you:

Part A, discusses the findings of the surveys after providing background information about the need for vocational training and the employment climate for the physically handicapped population.

Part B, is in the form of a manual for use by vocational counselors, program planners, and teachers. It includes a "catalog of job titles" which are then categorized by type of impairment and program areas that provide the training; guidelines and suggestions for teaching, and a bibliography identifying additional readings.

Final Report, covers methods, techniques, procedures applied throughout the effort.

We hope that you will find the information and data useful as you consider program improvements in your area of activity. We appreciate the efforts of Dr. Elaine Uthe, University of Kentucky, the project's director.

Sincerely,

Robert E. Spillman

Robert E. Spillman, Assistant Superintendent
for Vocational Education

bct

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ACKNOWLEDGEMENTS

A special note of appreciation goes to the following individuals for their contributions to this project:

The Advisory Committee for their interest and efforts;

Betty Kleen for her work with the business and industry survey, coding of DICTIONARY OF OCCUPATIONAL TITLES, and assistance with the compilation of data;

Susan Hillman for her assistance with coding and keypunching;

Willodeen Moss for her compilation of the annotated bibliography;

Ron Dockery for his work with the graduate/completer follow-up survey;

The Regional Vocational Directors and their staffs for aiding in the graduate/completer follow-up;

The individuals who assisted with the clerical work and production of the manuscript--Kathy Damron, Mazola Salmons, and Patrice Burns.

Elaine F. Uthe
Project Director

PROJECT ABSTRACT

Title of Project: Occupational Opportunities for the Physically Handicapped

Project Duration: May, 1978, to June, 1980

Objectives: The overall objective was to make vocational educators aware of the many job titles for which physically handicapped persons are currently employed and to aid in planning vocational programs for this group of students. Thus, this project was designed to identify a list of occupational titles held by physically handicapped individuals, to identify teaching procedures for the various types of handicaps, and make some recommendations for improving vocational education programs for the physically handicapped.

Procedures: An Advisory Committee participated in developing a questionnaire and procedures for surveying physically handicapped graduates/completers from 1976-1979 vocational programs as well as businesses and industries in four regions of Kentucky. The identified job titles were tabulated by vocational education region, size of company, type and severity of impairment, and vocational program area.

Contribution to Education: The data and its interpretation will aid vocational planners in developing new programs and may aid in changing procedures for existing programs. Guidance counselors may find the data useful in advising physically handicapped students about vocational education programs. Vocational teachers may use the job titles and teaching suggestions within a specific program area for aiding physically handicapped students acquire an appropriate marketable skill.

Contribution to Business: The background materials and the job title lists are useful to personnel managers in business and industry for employing physically handicapped applicants and in working with employees who become disabled.

Products: The project resulted in three products:

(1) Final Report, a summary of the project;

(2) Part A, the background of information about the physically handicapped in the world of work, the business and industry survey, and the graduate/completer survey; and

(3) Part B, the master lists of job titles analyzed by categories, teaching suggestions, resource list, job descriptions, and bibliography.

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OCCUPATIONAL OPPORTUNITIES FOR THE PHYSICALLY HANDICAPPED

Two concepts have been emphasized consistently in the American way of life: (a) education for all, and (b) concern for the individual. According to the Constitution of the United States and the Bill of Rights, all citizens are equal and have the right to life, liberty, and the pursuit of happiness. These simple statements made over 200 years ago become complex ones when efforts are made to live by them, and the nation is still wrestling with these concepts.

The nation and its citizens struggle to interpret the "equality of all citizens" concept; strategies are developed to achieve these goals--and these strategies often take the form of legislation. Legislation sets forth policy and law, but compliance in the full sense of the spirit is more difficult to achieve. Social structures and institutions as well as prejudices may need to be changed and/or channelled in another direction. The communication of the new interpretations of policy must be promulgated to citizens, employers, educators--and last but not least, the change must be internalized within each citizen before it can be termed successful.

The goal of vocational educators is to prepare productive workers who contribute to the economic well-being of the nation. Major efforts by this group and others are being made to extend the concept of occupational preparedness to a broader spectrum of the citizenry each year--the disadvantaged, the bilingual, and mentally handicapped, and now the physically handicapped.

Legislative Mandates

The complexity of serving the physically handicapped through mainstreaming in regular vocational programs involves many factors: (1) humanistic, psychological, and/or physiological problems; (2) financial cost and benefits; and/or (3) educational program planning and instruction.

The number of handicapped children in the United States (6 1/2 million, aged 6 to 19, reported by the National Advisory Committee on the Handicapped, 1976) indicates the need for planning an appropriate education for this group.

In recent years legislatures have passed laws that related specifically to the physically handicapped population. The Architectural Act of 1968 mandated that all public buildings be accessible to the physically handicapped. The Rehabilitation Act of 1973 dealt with social services, vocational training, and employment. The Education for Handicapped Children Act of 1975 mandated a free and appropriate education for handicapped children; the Vocational Education Amendments of 1976 mandated the accessibility of vocational programs to the handicapped. Also, the Civil Rights Act of 1964 mandated equal opportunity for all citizens, including the physically handicapped. The provisions in these acts are discussed in Part A.

Background Data

The 1972 Schechter study sponsored by the Social Security Administration provided background data relating to disabilities among adults. Employment statistics relating to the handicapped have been developed by the President's Committee on Employment of the Handicapped, the du Pont study, the United States Department of Labor, and others.

The number of disabilities rise with age; there are some basic differences between female and male problems. However, employment statistics for the physically handicapped review facts that destroy many of the biases and/or myths held by employers and vocational educators.

The Term "Physically Handicapped"

In this project the term "physically handicapped" refers to persons who have visual, hearing, speech, orthopedic, neuromuscular or neurological, or other health problems that limit or prevent occupational employment. Persons who are considered seriously emotionally disturbed and/or mentally handicapped, or who are classified as having "learning disabilities" are not included in the definition for this project.

The terms "handicap," "disability," and "impairment" are often used interchangeably, although they mean different things to various interest groups. "Handicap" has negative connotations to some; "impairment" seems to avoid labelling individuals. Both terms are used extensively in education. "Disability" is the term used most often in labor statistics, social security agencies, and employment groups.

For some individuals an impairment (a disabling condition) is a handicap; other individuals are able to succeed in spite of the impairment.

In this project the term "impairment" was used in identifying the condition that identified the graduate/completer and employee as "physically handicapped."

Current Emphasis

Physically handicapped persons need to acquire occupational skills that enable them to compete in the employment marketplace with the non-handicapped population. In the past much of this vocational training has been provided through vocational rehabilitation programs; some general training has been provided through Special Education or Special Vocational Programs; less vocational training has been available to physically handicapped persons through regular vocational programs.

Although past efforts tended to emphasize vocational training with the physically handicapped adult, current efforts are broadening the emphasis to include younger people--starting with mainstreaming handicapped persons in secondary and post-secondary programs in vocational education.

There is, however, little information about mainstreaming physically handicapped individuals in regular vocational programs in secondary and postsecondary institutions. Consequently, the area of selecting, instructing, job placement, and job success with the physically handicapped is only now becoming an important one. Little is known about career counseling at this age level, methods of mainstreaming in an optimal manner, methods of instruction within program areas, and systems for enhancing the job placement and success of this unique group.

Furthermore, the acquisition of occupational skills, knowledge, understandings, and attitudes is a multi-faceted, complex problem. What occupational skills can an individual with a specific handicap/disability realistically develop to a marketable level? And what type of job can the handicapped person expect after acquiring occupational skills?

The Need for This Project

This project is needed to determine those occupational titles for which the physically handicapped are hired. This information may be useful in counseling the individual who is handicapped, for planning vocational education programs for the handicapped, for mainstreaming the physically handicapped in regular vocational programs, and for making appropriate job placements.

ACTIVITIES AND ACCOMPLISHMENTS

The overall objective was to make vocational educators aware of the many job titles (occupational opportunities) for which the physically handicapped persons are currently employed; this data will aid in planning appropriate vocational programs for this group of students.

Specifically, a list of occupational titles were developed; they are presented in Part B by type and severity of impairment and by vocational program area. Teaching techniques are suggested according to types of impairments; recommendations are made about planning and/or improving vocational programs.

These project materials are to be utilized by vocational program planners, vocational teachers, guidance counselors, and personnel directors in businesses and industries.

Problem Under Consideration

This project was designed to assess occupational opportunities by identifying those occupational titles now held by physically handicapped employees using a two-way approach:

a. a survey of Kentucky businesses and industries to identify the job titles held by currently employed, physically handicapped individuals, and

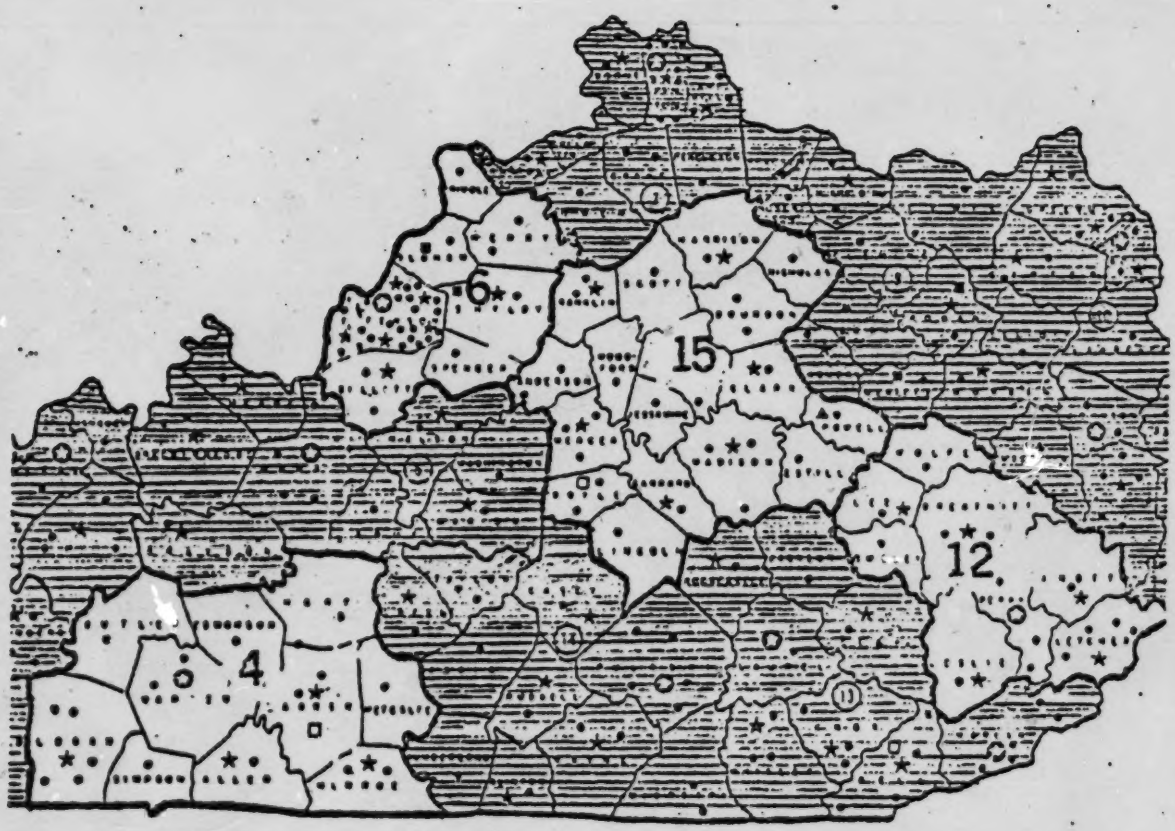
b. a follow-up of 1976-1978 physically handicapped graduates of vocational programs to determine job titles they held.

Both surveys were conducted in the same four vocational education regions of Kentucky (Exhibit 1): Region 4, Barren River; Region 6,

EXHIBIT 1

VOCATIONAL EDUCATION REGIONS USED IN SURVEYS

Region 4	Barren River	Region 12	Hazard
Region 6	Jefferson	Region 15	Bluegrass



Jefferson; Region 12, Hazard; and Region 15, Bluegrass. In addition, the items on the questionnaires were as similar as possible.

Those who are physically handicapped will benefit most if they themselves as well as educators and employers concentrate on what the physically handicapped can learn and can do. Emphasis should be placed on potential rather than on limitations. Vocational training and job opportunities should not be restricted to "traditional" roles and/or "mythical" limitations.

This study then seeks to do two things:

(1) identify job titles for which physically handicapped individuals are now employed in order to
   (a) identify career models
   (b) identify gaps in employment
(2) identify areas for improvement of vocational training for the physically handicapped group.

This project provides data about the job opportunity but does not provide solutions or remedies. That task is a challenge that faces counselors, vocational planners and teachers, and employers who work with an individual who is physically handicapped.

EXHIBIT 2 PHYSICAL IMPAIRMENT CODING SHEET

Code No.	
	Hearing Impaired
101	No obvious indication
102	Slight difficulty apparent
103	Moderate difficulty apparent
104	Moderately severe difficulty apparent
105	Severe difficulty apparent
	Visually Impaired
201	Physical appearance gives no indication
202	Some very slight indications of the condition, apparent to the trained specialist but not to the layman
203	Some fairly obvious signs of the disability or condition
204	Moderately severe indications of the condition
205	Condition is severe; stands out clearly to all concerned
	Both Hearing and Visually Impaired
301	No obvious indications
302	Slight difficulty apparent
303	Moderate difficulty apparent
304	Moderately severe difficulty apparent
305	Severe difficulty apparent
	Speech Impaired
401	No difficulty at all, observed or reported
402	Slight difficulty apparent
403	Moderate difficulty apparent
404	Moderately severe difficulty apparent
405	Severe difficulty manifested in this area

Code No.	
	Orthopedically Impaired
501	No apparent or reported difficulty
502	A little restriction but not enough to warrant special help
503	Moderate restriction. Can keep up with peers in some ways; in others, needs help or direction of others
504	Moderately severe restrictions
505	Severe restriction of locomotion
	Neuromuscularly and Neurologically Impaired
601	Aphasia
602	Cerebral Palsy
603	Dyslexia
604	Epilepsy
605	Muscular Dystrophy
606	Multiple Sclerosis
607	Paraplegia
608	Polio-caused Paralyses
609	Polymyositis
610	Quadriplegia
611	Spina Bifida
612	Spinal Muscular Atrophy
613	Stroke
614	Other (Specify)
	Other Health Impaired
701	Accidents (disfigurements)
702	Adolescent Pregnancy
703	Arthritis
704	Asthma
705	Cancer
706	Cystic Fibrosis
707	Diabetes
708	Heart Condition
709	Hemophilia
710	Lead Poisoning
711	Leukemia
712	Nephrosis and Nephritis
713	Rheumatic Fever
714	Sickle Cell Anemia
715	Tuberculosis
716	Other (specify)

GENERAL METHODS

An annotated bibliography of articles and projects was developed and categorized by codes. The searches included the following computerized and manual sources:

ERIC (Educational Resources Information Center) A search of educational journals and government publications about education

NTIS (National Technical Information Service) A search of publications from 250 governmental agencies such as NASA, HEW, DOD, DOT, NSF, and others

CIS ASI (Congressional Information Services and American Statistical Index) A search of publications dealing with legislation, federal law, and other governmental issues

Two manual searches were made in the following sources: (1) BOOKS IN PRINT, and (2) the UK King Library card catalog.

Exhibitors at the annual American Vocational Association Convention were contacted personally for information about instructional materials and/or equipment adaptations. The bibliography as well as the exhibitors' data are incorporated in Part B with the teaching suggestions and the resource list.

The Advisory Committee

An Advisory Committee (listed in Appendix A-3) was appointed to review the project purposes and then provide input; review procedures, questionnaires, and the sampling process; and suggest implications based on the results. The Advisory Committee included representatives from the Bureau of Vocational Education, Bureau of Exceptional Children, Special Vocational Programs, Bureau of Instruction representing the

physically handicapped; it also included the president of the Kentucky Chamber of Commerce, a physically handicapped person, a Special Education professor from the University of Kentucky, and a personnel manager.

Questionnaire Validation. The questionnaires were reviewed by the Advisory Committee to determine if they asked for the information needed for the project and if the items were worded correctly to obtain the needed data.

Human Investigations Committee

The cover letters, questionnaires, and the project proposal for both surveys were reviewed and approved by the UK Human Investigations Committee before distribution.

The Impairment Coding Sheet

An Impairment Coding Sheet (Exhibit 2) was devised for the various areas of the physically handicapped: hearing, visually, hearing and visually, speech, orthopedic, neuromuscular/neurological, and other health impairments. Severity levels and their descriptions were also coded for the first five types of impairments. This coding sheet was developed under the direction of a Special Education consultant from the College of Education, University of Kentucky.

Business and Industry Survey

The business and industry survey used a random sample stratified by vocational education regions, Standard Industrial Classification, and company size.

The business and industry questionnaire (Appendix A-1) asked personnel managers for the job title and three major job tasks for each physically handicapped employee, the job's DICTIONARY OF OCCUPATIONAL

TITLES (hereafter referred to as DOT) code number if known, date hired, level of job, type of impairment, description of any adjustment or adaptation of work or equipment, highest educational level, and type of vocational training if known. A box was included for the respondent to check if there were no physically handicapped persons employed.

The data were analyzed by vocational region, company size, type and severity of impairment. The methodology and data appear in Part A, Chapter 3.

Graduate/Completer Follow-Up Survey

The graduate/completer follow-up questionnaire (Appendix A-3) used the same Impairment Coding Sheet and the questions were parallel to those on the business and industry survey. The survey included the 1976-1979 physically handicapped graduates/completers from all levels of vocational programs in four regions. Other questions were drawn from the Kentucky Placement and Follow-Up System forms. An explanation of the methodology and the data appear in Part A, Chapter 4.

Validation Procedures

The validation process included three different procedures: (1) determining the validity of the questionnaires themselves; (2) assigning DOT numbers to the jobs held by physically handicapped employees; and (3) determining the vocational program that prepared students for each specified job title.

DOT Number Verification. The DOT code numbers were first assigned by one person based on the job title and the three major tasks listed and/or by verifying the DOT code number supplied by the respondent.

These DOT code assignments were then reviewed and verified by two other project staff as well as by state supervisor(s) and at least one university teacher educator from each vocational area.

Validation of Job Title Assignment to Vocational Program. The assignment of each job title to a vocational program area was made by a panel of experts consisting of the state supervisor(s) and at least two university teacher educators from each vocational program area. Some job titles were not claimed because they required more or less vocational training than included in the area or because they did not fit any of the vocational program areas. In addition, some job titles were claimed by more than one vocational program area; no steps were taken to resolve this problem and the job titles were listed in both areas.

The job titles by each vocational program area appear in Part B.

RESULTS

This project report is divided into three products:

Final Report. This section reviews the overall plan and results for the project. Job titles held by the physically handicapped are listed by type and level of impairment in Exhibit 3. (This list and others analyzed in different ways appear in Part B.)

Part A: Background and Survey Results provides background about the need for vocational training and the employment climate for the physically handicapped. The methodology for conducting the business and industry survey are described; then the data is analyzed. Both the methodology and the data from the graduate/completer survey are also presented in Part A.

Part B: Manual combines the results of the two surveys into one analysis. It is designed to be useful to counselors, vocational planners, and vocational teachers.

The Part B: Manual includes:

(1) the master list of job titles arranged alphabetically and then catalogs of job titles by type of impairment and also by vocational program area,

(2) DOT job descriptions for each of the job titles,

(3) annotated bibliography categorized by vocational program area, educational level, and type of impairment,

(4) synopsis of teaching guidelines and suggestions for vocational teachers who have physically handicapped students enrolled in class.

EXHIBIT 3

LIST OF JOB TITLES HELD BY PHYSICALLY HANDICAPPED
ARRANGED BY TYPE AND SEVERITY OF IMPAIRMENT*

Hearing Impaired

101 Alteration tailor

101 Day care worker
402 Houseparent
Sign writer, hand

102 Cleaner, automobile washer
401

102 Automobile mechanic
402 Engine repairer, service

103 Compositor (prtg, pub)
Compositor (prtg, pub)
Credit manager
Dishwasher
Food order expediter
Marker (ret)
Project engineer
Supervisor, electronic data processing

103 Projectionist
403

103 Front-end mechanic
716 Painting machine operator

104 Company worker (mining)
Forklift operator
Laborer, museum
Laborer, museum
Price checker
Supervisor, material handling

104 Surveyor helper
402

104 Laborer, golf course
404

Hearing Impaired (cont'd)

105 Assembler, electrical access
Assembler, electrical access
Claims clerk I (insur)
Cleaner, commercial
Cleaner, institutional
Company worker (mining)
Compositor (prtg, pub)
Dining room attendant
Encoder (fin)
Laborer, museum
Meter reader
Painter, brush
Phototypesetter operator
Stock clerk, grocery goods
Stock clerk, grocery goods
Proofing-machine operator

105 Post-office clerk
403 Post-office clerk

105 Assembler (mfg)
405 Carpet cleaner
Clerk-typist
Dishwasher
Drafter, commercial
Electronics assembler
Laborer, road (const)
Mail clerk
Medical technologist
Noodle maker (food proc)
Stripper, paint
Supply service worker (med)
Utility worker (const)
Welder helper

105 Decal applier
405 Mail clerk
203

*The 3-digit number is a code number for the type of impairment and its severity; see Exhibit 2. If two or more numbers occur together, the employees holding those jobs had all the named impairments.

Visually Impaired

201 Nurse, Licensed Practical
Truck driver (agric delivery)

202 Accounting clerk
Bookkeeper II (educ)
Community organization worker
Farmworker, grain
Food order expediter
Gas-regulator repairer
Industrial truck operator
Payroll clerk, chief
Programmer
Taxicab starter (dispatcher)

202 Inspector, tool
502

202 Visual aide
502
708

202 Taxi driver
715

203 Operator, dairy processing equipment
Receiving clerk
Vice president (fin)
Welder-fitter

203 Community health worker
402
502
707

204 Packager, hand (mfg)
Teller (fin)

205 Film cutter and splicer
Film splicer
Insulation installer
Medical transcriber
Surveyor helper

Hearing and Visually Impaired

303 Sales clerk
Secretary

303 Painter, brush
403

Hearing and Visually Impaired (cont'd)

303 Postal distribution clerk
404
704

305 Janitor, building

Speech Impaired

402 Clerk-typist, head
Dietary aide
Electronics technician
Food order expediter
Janitor
Locksmith
Manager, fast food service
Medical records clerk
Press operator (mfg)
Supervisor, food-service

403 Clerk, mail room
Clerk-typist, medical
Cost clerk
Teller, head (fin)

404 Laborer, laundry
Truck driver (agric delivery)

405 Cleaner, automobile washer
101

Orthopedically Impaired

501 Accounting clerk
Contractor (const)
Electrician
Lab assistant, medical
Nurse, general duty
Secretary, personnel
Supervisor, food-service

502 Accounting clerk
Admissions evaluator
Bulldozer operator
Caseworker (social worker)
Clerk-typist
Computer operator
Cosmetologist
Drill press operator
Employment counselor

Orthopedically Impaired (cont'd)

502 Food order expediter
Forging press operator, leader
Forging press operator
Front-end mechanic
Manager, bulk plant
Manager, retail store
Material handler
Motor repairman
Nurse, general duty
Nurse, head
Nurse, office
Order clerk (agric)
Order clerk
Parts-order-and-stock clerk (auto)
Programmer
Sales clerk
Secretary
Shipping clerk
Surgery clerk
Taxi driver
Tool and die maker
Truck driver (bldg mat)
Veteran's job developer
Welder, combination
Welder-fitter

502 Cleaner, commercial
102

502 Dishwasher
103
402
708

502 Carhop
704 Dining room attendant

502 Manager, sales
707

503 Accounting manager, office
Automobile-mechanic helper
Boilerhouse superintendent
Cleaner, institutional
Clerk, administrative
Electronics technician
Laborer, stores
Maintenance supervisor
Medical transcriber
Respiratory therapist, supervisor
Security officer
Small engine mechanic
Supervisor, carpenter

Orthopedically Impaired (cont'd)

503 Clerk, general
203

504 PBX operator

505 Clerk, general (educ)
Clerk, general (med)
Nurse, Licensed Practical
PBX operator
Paint sprayer

Neuromuscularly or Neurologically Impaired by Type (Not Severity)

602 Bagger, grocery
Child-care attendant
Dishwasher
Eligibility worker III
Operations officer (fin)
Stock clerk, grocery goods
Stocker

603 File clerk I
Grinder
Keypunch operator

604 Cleaner, hospital
Clerk-typist
Food order expediter
Keypunch operator
Laborer, general
Laborer, stores
Nursing assistant, operating room
Playroom attendant
Press operator (prtg)
Stock supervisor (ret)
Supervisor, carpenter

605 Accounting clerk

606 Marketing research analyst

607 Dispatcher, radio (police)
Eligibility worker III
Farmer, grain
Job setter, machine shop
Sales representative (bldrs sup)
Telephone solicitor

507 Manager, retail store
703

Neuromuscularly or Neurologically Impaired by Type (Not Severity) (cont'd)

608 Accounting clerk
Accounting clerk, data processing
Assistant vice president (fin)
Billing clerk
Check-processing clerk I (fin)
Dispatcher
Eligibility worker III
Kettle man (roofing)
Medical records technician
Sales representative (adver)
Secretary, medical
Switchboard operator
Telephone solicitor

608 Taxi driver
202
402

608 Power sewing machine operator
703

610 Manager, advertising

611 Superintendent, plant protection

613 Dispatcher, radio (police)
Order clerk

613 Taxi driver
202

613 Contractor (const)
703
708

614 Appliance repairer
Appliance repairer
Industrial truck operator
Photographer
Programmer
Programmer

Other Health Impaired by Type (Not Severity)

701 Construction worker I
Cooler worker (dairy prod)
Dispatcher, service
Electric-meter repairer
Eligibility worker III

Other Health Impaired by Type (Not Severity) (cont'd)

701 Industrial truck operator
Laborer, machine shop
Laborer, stores
Maintenance mechanic
Meter reader
Parts-order-and-stock clerk (auto)
Sales assistant
Secretary
Sheet metal worker
Sheet metal worker
Sheet metal worker
Stock clerk

701 Stock clerk, grocery goods
201

701 Electric-meter repairer
708

702 Food order expediter
Receptionist

703 Cashier-checker (sales)
Food order expediter
Library clerk III
Manager, fast food (area supervisor)
Nurse, head
Safe deposit box rental clerk
Salesperson, automobile
Service representative (tel/teleg)
Supervisor, laundry

704 Clerk-typist, medical
Housekeeper, medical services
Lab technician, medical
Radiologic technician

704 Customer service clerk
501

705 Food order expediter
Front-end mechanic
Manager, fast food service
Pressure controller (gas)

707 Clerk-typist
Drafter, assistant (elec)
Janitor
Maintenance supervisor
Manager, advertising
Nurse, head

32

Other Health Impaired by Type (Not Severity) (cont'd)

707 Nurse's aide
Nurse's aide
Programmer
Supervisor, food-service

707 Taxi driver
202

707 Taxi driver
716

708 Buyer (mfg)
Cleaner, hospital
Inventory clerk
Maintenance machinist
PBX operator
Shipping clerk
Shipping clerk
Supervisor, food-service

708 Taxi driver
302

711 Psychiatric aide

713 Food order expediter

714 Outpatient-admitting clerk

716 Dining room attendant
Drafter, chief, design (light, heat and power)
Food order expediter
Gas-meter installer
House-piping inspector (gas)
Meter reader
Sales representative (gen mdse)
Veteran's job developer
Veteran's job developer

Implications for Use

Four different audiences may find uses for the assessment data from this project:

Vocational Planners. The job title approach in both the business and industry survey and the Graduate/Completer Follow-up directs attention to those jobs now held by handicapped employees. Thus, this catalog can be analyzed in two ways: (a) to show those occupations in which the handicapped are currently successful--and in which vocational programs should be continued, improved, and reinforced; and (b) to identify gaps in which the handicapped person is not usually employed at present. The latter should receive the greatest emphasis as they may be used to develop new programs, develop greater accessibility to existing programs, and prepare action to overcome traditional prejudices and/or misconceptions.

Although the job title approach was used, other analyses can be made concerning length of employment at a job; educational level of employees; work, space, and/or equipment adaptations.

Counselors and Job Placement Personnel. The master catalogs show job titles for which physically handicapped persons are employed; counselors may find these catalogs useful in assisting students in choosing appropriate vocational programs and occupational careers. The job title may also serve as a list of "successes." Job placement personnel may find the materials useful in assisting graduates and/or completers in seeking jobs when vocational programs are completed.

Vocational Instructors. The classroom instructor may find the catalogs of job titles, the annotated bibliography, and the teaching suggestions helpful as they attempt the mainstreaming of physically

handicapped students in vocational programs. The job title catalogs will serve as "career models and/or successes," the bibliography will enable the classroom teacher to identify additional reading materials, and the teaching suggestions will be helpful in planning individual programs and in executing instruction.

Personnel Managers. Employers faced with compliance to affirmative action and equal opportunity laws for employment of the handicapped may also utilize the job title catalogs. Because the job titles are listed by type of impairment as well as by DOT (DICTIONARY OF OCCUPATIONAL TITLES) job numbers, the personnel officer may be encouraged to match handicapped applicants with jobs on which others have been successful. Some of the work, space, and/or equipment adaptations identified in the survey and/or literature may also be helpful.

SUMMARY AND RECOMMENDATIONS

The goal of vocational educators is to prepare productive workers who contribute to the economic well-being of the nation. Major efforts are aimed at providing the physically handicapped segment with an equal opportunity for vocational training and successful employment as productive workers in the world of work.

Many times physically handicapped individuals are "assigned" to certain occupational areas; yet they are capable of performing a great variety of jobs. This project identified job titles now held by physically handicapped employees that would serve as "career models" and that could be used to identify "gaps" in vocational training and employment.

A survey of businesses and industries in Kentucky found 165 different job titles held by physically handicapped employees. The survey included a stratified random sample of businesses and industries by size of company, Standard Industrial Classification, and vocational region (Regions 4, 6, 12, and 15).

A follow-up survey of 1976-78 physically handicapped graduate/completers of vocational programs from secondary and postsecondary programs in the same vocational regions identified 53 different job titles.

Highlights of the Business and Industry Survey

Only 88 (11.6 percent) of the 761 responding companies indicated that they had physically handicapped employees. Job opportunities seemed to be approximately equal in small, medium, and large companies

and averaged about 1 in 50 employees in any company that had physically handicapped employees. This ratio, however, should not be considered a goal.

The physically handicapped person is likely to have a "better than expected" opportunity for employment in the services, manufacturing, and transportation companies and a "less than expected" opportunity in the construction and the public administration areas.

Few adaptations to the work space, job tasks, and/or equipment were reported for these employees; therefore, little job redesign has taken place. Although the present employees may not need such modifications, those physically handicapped employees who do need such consideration may not have been hired in the past.

A broad spectrum of physical impairments were reported: 70 (29.3 percent) with health impairments; 57 (23.8 percent), orthopedic; 43 (18 percent), neuromuscular and/or neurological; 30 (12.6 percent), hearing; 22 (9.2 percent), visual; and 1 (.4 percent) with hearing/visual impairments.

Nearly 59 percent of the current physically handicapped employees were employed on or before 1973; 37 percent of these were still holding entry-level jobs according to the employer. There appears to be a slight increase in the number of physically handicapped persons employed in recent years, but the number reported is too small to be considered a trend. The majority (54.6 percent) had only a secondary education.

The physically handicapped employee is still a rarity in the world of work, and few if any accommodations were reported. A greater number of companies need to employ physically handicapped individuals; job

redesign may be necessary when and if the applicant has multiple and/or severe impairments.

Highlights from the Graduate/Completer Survey

A total of 364 physically handicapped individuals were identified by regional vocational directors as graduates/completers of secondary/postsecondary programs from 1976-78. Only 67 (18.4 percent), were usable responses; hence, no interpretation can be made from this follow-up.

The physically handicapped graduates/completers held 53 different job titles; most titles may be classified as entry-level. Twenty-two were employed full time and twelve were employed part time; fifteen were unemployed and available for work; five were not working and not looking for work, and eleven were in school full time and not employed.

Although physically handicapped employees usually have a rather stable employment record, there is indication that this particular group of graduates/completers experienced unemployment and/or short employment records (less than six months at one job). Again, the total number of responses is very low, and the questionnaire did not differentiate between "permanent" and "summertime" jobs.

An in-depth study of all (or a larger proportion) of the graduates/completers needs to be conducted in order to obtain solid and substantive data.

Final Reports

Part A of this report provides background about the physically handicapped, relevant legislation, and the results of both the business and industry survey and the graduate/completer follow-up.

Part B of this report is in the form of a manual; it presents the master lists of job titles by DICTIONARY OF OCCUPATIONAL TITLES code number in both numeric and alphabetic order, by type and severity of impairment, and by program area. Guidelines for using these lists and teaching suggestions are provided; job descriptions for the various job titles are included. An annotated bibliography and a list of resources are available for those who wish to explore the subject in greater depth.

"What Vocational Opportunities Exist for the Physically Handicapped," a media program based on this report, was developed and may be used for inservice programs.

DISSEMINATION ACTIVITIES

The project report will be disseminated through the Research Coordinating Unit and INNOVATE. In addition, the following activities have been completed or will be completed.

Speeches

Three speeches to Keith Bayne's Teacher Competency Project (Madisonville, Lexington)

Bureau of Vocational Education Fall Planning Committee, August 31, 1979

Bluegrass Vocational Education Region 15 In-service Session, September 13, 1979

UCC/BVE meeting, Bardstown, October 5, 1979

Kentucky Personnel Guidance Association Convention, October, 1979

Dean's Grant Mainstreaming Project, November 7, 1978; Consultation with University of Tennessee (Knoxville) teacher education team

Business Teacher Educators' Meeting, Lake Cumberland, October 10, 1979

AVA, Trade and Industrial Program, to be given December, 1980, in New Orleans

Writings

KVA Newsletter, August-September, 1977

College of Education Newsletter, UK, September, 1979

KPGA Newsletter

"Business and Office Careers for the Physically Handicapped," Kentucky Business Education Association Journal, Spring, 1980, pp. 7-10

Slide/Tape Program

"What Vocational Opportunities Exist for the Physically Handicapped?" (available for inservice programs)